Sorrentino, M., and De Marco, M. Evaluating E-Government Implementation. Opening the Interdisciplinary Door. Hans J. Scholl, ed., *E-Government: Information, Technology, and Transformation*, Vol. 17 (Armonk, NY: M.E. Sharpe, 2010), 72-88

CHAPTER 5

EVALUATING E-GOVERNMENT IMPLEMENTATION

Opening the Interdisciplinary Door

MADDALENA SORRENTINO AND MARCO DE MARCO

Abstract: *The emergence of digital government (or e-government) has sparked debates on its consequences. Despite a certain rhetoric on the changes envisioned, it is not yet clear to what extent this kind of initiative can help provide solutions to problems of public import. In this chapter, we adopt a theoretical approach to analyze why it is so difficult and complex to evaluate the effects of e-government. Specifically, we maintain that the e-government evaluation puzzle needs to be addressed by first focusing on the conceptual aspects before identifying the tools and methods. We also believe that because e-government requires the joint use of intervention and support actions, the assessment must take into account not one, but a combination of the methods offered by the different disciplinary areas. From among the various contributions we can draw on for this purpose, we will seek to demonstrate how organization theory can provide a core reference point. In particular, the studies that perceive the organization as a process of bounded rational actions and decisions not only enrich the evaluation framework with a new analytical dimension but also can provide a point of convergence for the different branches of knowledge needed to analyze and evaluate such complex social phenomena as those connected to digital government. It is our hope that the view*

proposed here contributes to the discussion for other interested scholars and better informs public management praxis.

Keywords: *E-Government, E-Government Implementation, E-Government Evaluation, Interdisciplinary Approach, Organizational Change, Technological Change, Process-based Perspective, Bounded Rationality, Public Organizations*

Governments and observers the world over are heightening their focus on electronic government (EG). The Organization for Economic Cooperation and Development (OECD, 2004) associates EG—by which term it means the public sector's deployment of information and communication technologies ICT, including the Internet—with objectives such as efficiency, quality of services, effectiveness of the public action, accountability, and a renewing of the political agenda, which are ambitious goals to say the least. Precisely due to the importance of the theme and the significant economic resources invested (CapGemini and TNO Consulting, 2004; Cresswell et al., 2006; EITO, 2007), the observers, the national and supranational regulatory authorities, and the press are paying greater attention to the implementation phase, that is, to the concretization phase of the initiatives and projects, in order to evaluate its postimplementation effects (Dunleavy et al., 2002).

Many people underscore that "the need to tie the state budget more closely to the efficacy of public spending . . . has grown in recent years. . . . [A]dministrative action must be verified in terms of its economics, efficiency, and efficacy, according to adequate and transparent models and tools of measurement" (CNIPA, 2007, p. 6). Costs are a growing concern as local, state, and national governments face budget deficits and have to balance information technology (IT)

spending with spending for health, education, welfare, and defense (West, 2005). The challenge is huge. Indeed, EG implementation remains "difficult, risky and expensive" (OECD, 2004, p. 93). The potential benefits of EG can no longer be assumed, but must be demonstrated (Dawes, 2008).

While in many countries evaluation has been institutionalized as a typical organizational function, the state of knowledge concerning the effects of EG is relatively underdeveloped. That means we are far from being able to draw on a conceptual framework that describes the overall picture of the initiatives, their reciprocal relations, the effects envisioned, and the effects actually produced.

But on what basis can we evaluate the success of an EG program? At present, there are no tried-and-trusted common criteria capable of responding to this key question. Not even regular surveys carried out by authoritative institutions such as the OECD reflect the widespread perception of the inadequate knowledge that informs concrete practices. In one of its latest reports, referring to Holland, which is certainly one of the most technologically advanced countries on the digital government front (OECD, 2007, p. 17), we read: "The purpose [of the government officials] of monitoring and evaluating activities primarily seems to be that of tracking user take-up of e-services, not determining whether overarching e-government goals of efficiency and effectiveness are being met."

The diffusion of EG is documented by huge quantities of data. Thanks to computer platforms, database management systems (DBMS), and Web browsers, reporting programs have come within the reach of many public officers, as well as the mass public. For example, in Italy, EG action at the national level is guided by ten legislative objectives defined by the minister for innovation in 2002. In all its annual reports, the Centro Nazionale per Informatica nella Pubblica

Amministazione (CNIPA; the independent authority that monitors and assists all Italian central agencies involved in computerization programs) illustrates the state of progress of each objective/project on the basis of nationally established indicators (De Marco and Sorrentino, 2007). Today, any citizen who wants to know the current situation of the 134 EG projects cofinanced by the Italian government as a result of the first national tender can visit the CNIPA Website (www.cnipa.it) and use the "monitoring dashboard" to get detailed information, and also in graphic format, on the programs implemented by Italy's local administrations. Are we looking at examples of EG evaluation systems? The answer can only be no: all of the models cited are at most systems of indicators useful for formalizing the end of the project/s in question or to communicate to the outside world the outputs achieved to date.

In this chapter, we maintain that to overcome the evaluation hurdle we need to first focus on the conceptual aspects of EG, before we even start to look at the tools and methods (see Goggin, 1986; Gupta and Jana, 2003). From among the various disciplinary contributions that we can draw on for this purpose, we will seek to demonstrate how the theory of organization provides a fundamental reference point, even though, inexplicably, it continues to be neglected. In particular, the studies that perceive the organization as a process of bounded rational actions and decisions can be a point of convergence for the different branches of knowledge needed to analyze and evaluate complex social phenomena, such as those connected to digital government (Scholl, 2005). Naturally, we neither attempt to solve nor address the issue of the best criteria, measures, and methods to use in dealing with the problem of EG evaluation. Indeed, we believe that a knowledge of the conceptual underpinnings of the diverse proposals is an essential condition for laying the cornerstones of a debate that is truly interdisciplinary (given the nature

of the problem) and that, in time, such knowledge will help to enrich the implementation research agenda.

Therefore, in the following pages we:

<<BL>>

- explain why the commonly used theoretical frameworks do not adequately represent the phenomena related to EG implementation;
- take a first step toward an alternative interpretive proposal that incorporates and adopts the contributions from organization science; and
- suggest the use of this interpretive proposal to address EG evaluation.

<<END BL>>

Our analysis identifies EG outputs as those "products" generated by the work of the public administration (PA)—for example, e-services, certificates, permits, and applications processed. On the other hand, EG outcomes are the short- or medium-term effects that emerge when the output reaches the target market—citizens, businesses, other PAs. Ultimately, the impacts refer to the capability of the program to address underlying problems of social relevance. Among the many examples of socially relevant problems that are generally linked to EG are the reduction of social unrest, greater democratic participation, equity, the narrowing of the digital divide, and citizen perception and engagement. Compared with outputs and outcomes, the impacts are more ambitious as these "force one to ask what is the final significance of what we are doing?" (Regonini, 2001, p. 163).

Starting with a broad definition of evaluation, first, we explain why evaluating EG is particularly difficult and complex, and then we highlight the key assumptions underpinning mainstream approaches. We then propose the theory of organizational action as an

interdisciplinary meeting place for analyzing EG implementation, before going on to reinterpret two examples from Italian experience to underscore the heuristic potential of this theoretical proposal. The chapter concludes by discussing the implications of this perspective for the research and practice of EG evaluation.

UNRAVELING THE KNOT OF E-GOVERNMENT EVALUATION

Evaluation can have a number of meanings that can differ widely depending on the disciplinary perspective adopted by the observer and the context examined. A good point of departure is the definition provided by Rossi and Berk (1981) quoted in Browne and Wildavsky (1984, p. 185): "Evaluation research may be conducted to answer questions that arise during the formulation of policy, in the design of programs, in the improvement of programs, and in testing the efficiency and effectiveness of programs that are in place or being considered. Specific policy questions may be concerned with how widespread a social problem may be, whether any program can be enacted that will ameliorate a problem, whether programs are effective, whether a program is producing enough benefits to justify its cost."

Rossi and Berk refer to public policies and programs, and also emphasize the nature of the research applied to the evaluation. We believe these authors have proposed a sufficiently broad definition that can be usefully applied to our concept as well, given that EG is progressively acquiring a less technocratic and neutral connotation: "Digital government is moving towards the characteristics of other policy types. . . . It is becoming more partisan and more controversial" (West, 2005, pp. 168–170). It is also our belief that evaluation is not the same as a generic study, conducted theoretically or in abstract terms, on social change, but

instead, it consists of a specific study of the change traceable to one specific intervention and that alone; it seeks to broaden the cognitive position of the actors involved (Lippi, 2007, p. 54; Stame, 2007). As a consequence, evaluation research is initiated on the mandate of one stakeholder (a category that includes all of the social actors with vested interests that can have an impact on the evaluation results), who takes on the role of client; that precondition is unavoidable for the obvious reason that the study pathway and the research questions are not chosen based on the scientific interests of the evaluator. Neither are the research hypotheses formulated autonomously, but, on the contrary, may vary according to the nature of the context and the specific needs of the recipient. The evaluator relies on a toolbox (conceptual, methodological, technical) to ascertain whether the intervention has or has not changed "the world" as called for by the initial plan (Mazmanian and Sabatier, 1981; Regonini, 2001; Stame, 2007). Disregarding the empirical nature of the evaluation means misrepresenting the intrinsic mission of the evaluation and comparing it with any other kind of investigation into the social scenario, ignoring that its job is to formulate opinions aimed at influencing policymaking (Lippi, 2007, p. 56).

Those who venture into the broader terrain of EG performance evaluation—in this chapter we use the words "performance" and "results" to mean the whole of the outputs, outcomes, and impacts—find themselves up against a variegated landscape through which it is hard to chart a path. From the conceptual viewpoint, the terms of the issue seem clear enough: we are talking about conducting a retrospective analysis of EG plans, programs, and projects, guided by the basic questions of evaluation: When? Where? For whom? What? Why? (Browne and Wildavsky, 1983, p. 206). The evaluator has to make decisions that will influence his/her mission, such as whether to undertake an ex post (i.e., retrospective), in itinere (i.e., during the

implementation phase), or ex ante (i.e., before the launch of the implementation phase) evaluation (the when?); decisions as to the scope of activity and the selection of sites to be studied (the where?); responsibilities toward an institution or a specific interest group (the for whom?); phenomena (e.g., projects, programs, services) to be assessed (the what?); and the reason for the study (the why?).

So where does the difficulty lie? Paradoxically, those five questions are also conflicting drivers between the diverse ways of perceiving and carrying out evaluation studies. A number of paradigms are confronted (Hatch, 2006), along with their defining vocabularies and themes (Stame, 2007). From the standpoint of concrete practices, it is not always easy to respond in a univocal way to the basic questions. For example, it is very hard to identify clearly the purposes for launching an evaluation. Also, in practice, the classic distinction between ex ante, in itinere, and ex post evaluations can prove to be unrealistic because the analysis of a problem is not always preceded by the identification of the solution; on the contrary, often the PA decides to deal with a problem because it believes it has the appropriate solutions (Regonini, 2001). The aims of the evaluation can overlap and be hard to untangle. The ways in which the evaluation can influence the surrounding environment are not clarified. For example, should an intervention be judged solely in terms of its official goals, or, conversely, should we also consider unexpected positive effects and unforeseen consequences. Is it possible to express an opinion regardless of those goals? (Pressman and Wildavsky, 1973).

We should not be surprised by the fact that many public administrations involved in EG prefer to focus on the least problematic aspects of the postimplementation phase, or what is called “delivery benchmarking” (e.g., many countries have successfully set up systems of indicators for measuring progress in the development of the information society). Often these are

presented as given indicators of success, but, in reality, they simply document the outputs obtained in the given timeframe: the economic and technical investments, user categories, user satisfaction levels, level of interaction, and compliance with international standards (for a review, see, for example, West [2006]). Even in an advanced country such as Norway "a whole-of-government framework for monitoring and evaluating EG at the ministry and agency level is still not in place" (OECD, 2005, p. 147).

The complexity of the EG evaluation is also linked to the fledgling state of this field of study: EG is a new and growing area, still in its infancy (Ferlie et al., 2003; Grönlund and Andersson, 2006; Grönlund and Horan, 2004; Löfstedt, 2007; Scholl, 2006). As a consequence "it has had limited time to develop its own conceptual foundations" (Heeks and Bailur, 2007, p. 256). EG is the fruit of a convergence of several research domains. Information systems lie at the genesis of EG infrastructures (Irani et al., 2005), therefore, when EG started to gain importance and visibility, it seemed fairly clear that ICT studies were looked to as one of the key reference disciplines. Electronic government research also shares objects of study with two neighboring disciplines: public administration and computer science (Scholl, 2006). Important contributions can be found as well in sociology, policy studies, and organization science, to name the most relevant. Nevertheless, truly interdisciplinary studies have not yet emerged in electronic government research (Scholl, 2006, p. 20).

The first academic contributions in the EG sphere were aimed at the description of individual case studies at the central or local government level to identify the critical success factors that might explain the effects (generally positive) of the different experiences. Researchers were primarily interested in highlighting the tangible effects of the projects (often executed in a pioneering way), in terms of the artifacts created, the types of services offered

through electronic channels, and the user uptake, with the aim of pinpointing the best practice to advise. However, these unquestionably interesting studies have been unable to clarify what really happens in that black box called EG (Yildiz, 2007).

The evaluation theme has been addressed using a variety of approaches. A substantial body of literature has sought to demonstrate the presence of causal relations between particular EG projects or initiatives and some of the intangible effects, including: accountability, transparency, citizen trust, and so on. For example, on the subject of accountability (see also Griffin and Halpin, 2005; Gupta and Jana, 2003; Janssen et al., 2004), the study by Wong and Welch (2004) compared the openness of the Web sites of EGs in fourteen countries and tested the impact of the contextual and organizational factors on their openness. In other cases, the objective of the scholars was to identify and evaluate predominant patterns in the development of e-services in regional and local governments (Irani et al. 2005; Kaylor et al., 2001; Löfstedt, 2007) or between countries (Janssen et al., 2004; Pina et al., 2007). Peters et al. (2004) have tried to assess the current measuring tools used by Dutch agencies to benchmark their situation. A recent study by Lim and Tang (2008) analyzed whether and how EG and related initiatives affected the perceived performance of environmental decision making. Each time, the research sets out to offer insights and key factors inherent to EG implementation efforts (Beynon-Davies and Williams, 2003; Chan et al., 2008; Pardo and Scholl, 2002). Gil-Garcia and Pardo (2006) and to propose multidisciplinary, multimethod approaches as powerful research alternatives that can offer a comprehensive understanding of digital government.

Other, less numerous studies have attempted to develop frameworks that support the evaluative design of EG projects, as in the case of Grimsley et al. (2005), who formulated a model based on a stakeholder-centric approach. Cheng et al. (2007) suggest the use of the

balanced-scoreboard approach to devise a systematic EG evaluation model. While the attempt by Fear (2007, p. 13) is highly ambitious, given that it proposes a framework to: (a) determine which components are essential to give the policy external validity, credibility, and implementability; and (b) provide a common point of reference for policymakers, stakeholders, and evaluators. Ultimately, we cite the original work by De (2006), who placed the evaluation of EG systems in a larger perspective that factors in the effects of the projects on the policy recipients. Drawing on a dual analytical repertory—that offered by management sciences and that of the theory of development proposed by Nobel laureate Amartya Sen—the author has demonstrated the usefulness of approaching the evaluation theme from an interdisciplinary perspective, integrating the contributions proposed by different branches of study.

COMMENTARY ON THE MOST COMMON ASSUMPTIONS OF E-GOVERNMENT EVALUATION

The above selected review raises an obvious question. Why have the evaluation proposals developed to date had such a modest effect on the practice of EG evaluation? It is not easy to answer this question without referring to specific examples of techniques, tools, or empirical cases. As we intend to advance a general type of concept, we must necessarily refer to the fundamental assumptions of the discourse, given that we are interested in highlighting which methods of reading and interpreting the organized setting underpin the diverse proposals indicated in the earlier section. In particular, we will focus on two crucial aspects of our discussion: the relationship between technology and organization and the concept of rationality. However, it must be pointed out that a quick answer would mean a sharp radicalization of the

positions. No evaluation theory or practice can be completely pigeonholed into a concept (which would be considered an ideal type in the Weberian sense). In addition, concrete reality presents us with evaluation practices, models, and theoretical frameworks that draw on these assumptions, often unknowingly or without explicit reference. As a result, it is not always possible to trace a line of demarcation between one proposal and another.

Let us start with the first issue: the relationship between technology and organization. The fact that technology plays a significant role in the analysis of organizational change in the public sector has now gained broad consensus (McNulty, 2003). Nevertheless, it is one thing to recognize this role, and quite another to consider technology an external constraint to the organization. The contributions that see the concept of organization as a predetermined social system of the subjects (objectivist approach) say that the technology has a change-generating "impact" on the organization. The organizational structure or the "fit" between structure and IT determines its effectiveness (Crozier, 1976). The separation of the two spheres leads the actors to believe that the evolution of technology has the power to solve problems (both organizational and others), which it cannot possibly do on its own.. As underscored by Fletcher (2002, p. 724): "The design and implementation of an electronic government has caught the attention of the public and the policymakers in a manner that is sparking excitement and urgency to see it unfold." The objectivist approach, which is often associated with a normative orientation (Crozier, 1976), also includes the widespread idea that technology is always and everywhere a tool of emancipation, participation, empowerment, democratization, and so forth.

In addition, those theoretical proposals that perceive the organization as a social system that starts to be built with the interaction of the subjects (subjectivist approach) see the organization and the actors as separate entities. In this case, technology is the materialization of

the “social,” or a means capable of influencing the construction of meanings by people. The technological artifacts are placed alongside the culture, the opinions, and the personal interests of the diverse actors.

In each of the above situations, technology and organization are separate elements driven by their own internal dynamics. Technology is an external constraint and is treated as such. In the former case (objectivist view), the organizational action becomes a dependent variable as opposed to a technical variable: “the organizations must adapt to technological change” (Cyert and Kumar, 1994, p. 333). In other cases, the dependent variable is the technology (or its pattern of diffusion), which is considered a means to attain the objectives of the public organizations that use it. On the other hand, the subjectivist view believes that technology influences the organizational dynamic due to its power to affect the construction of meanings; in addition, technology can be used to establish individual or vested interests: “[technology] is the means to achieve the goals of those who use it” (Kraemer and Dutton, 1979, p. 102).

The second issue, the concept of rationality, also produces two opposing conceptions. The idea of objective rationality (present in the mainstream version of EG evaluation) assumes the existence of a technical rationality that goes beyond any other interests of the parties and, therefore, the only legitimate approach. It is assumed that the evaluator is fully aware of all the alternatives. The conditions of perfect information enable both the maximization of the objectives and the use of the resources in the result obtained. This view sanctions the superiority of technical rationality over organizational rationality and individual rationalities, thus excluding from the discourse of organizational change (and its evaluation) the importance of the interests and objectives of the parties. It is no coincidence that in all those circumstances in which the management of change fails to achieve the desired results, responsibility is attributed to those

forces that resist change in the name of unjustifiable and irrational personal interests (Vann, 2004).

On the other hand, the idea of rationality that can be inferred only retrospectively characterizes the proposals inspired by the social-constructionist approaches to evaluation. The evaluations carried out in line with a subjectivist view interpret "in a political key" what actually happens in the concrete reality in the face of a new, complex, and pervasive computerization project (Markus, 1983). Given that the only planning possible—if it still makes sense to use this term—is shaped as a concrete reality in an uncertain situation, the evaluators mainly focus on analyzing the contribution given by the diverse social actors to the implementation of a program and the methods used to launch it. The focus on what actually happens rather than on verifying the objectives or standards reached means that even unexpected effects and possible failures can be considered successes.

It is not our intention to establish who is "right" or who is "wrong" in these opposing views. The question, if approached in these terms, would be a "mis-question." Nevertheless, the polarization of assumptions around extreme positions, or those in any way firmly anchored to "one-way" interpretations, has yielded scarce fruit up to now, from both the theoretical and the practical perspectives, so we must move on (Becker and Niehaves, 2007; Scholl, 2003, 2005, 2006). Concrete reality is always multifaceted and difficult to approach using a dichotomist reading and interpretive keys (the objectivist approach vs. the subjectivist approach), given that neither approach is capable of capturing the nuances, the intermediate conditions, the contradictions, or the particular contextual factors inside or outside public agencies. In other words, we need to adopt an integrated analytical framework that takes system and actors jointly (instead of separately) into account, which means that interpreting and evaluating technological

change must be a factor in influencing both exogenous environmental factors and individual conditions and strategies. Therefore, evaluating EG requires the use of methods belonging to scientific research, which means it must draw on interconnected information in the sphere of "an adequate causal theory" framework (Mazmanian and Sabatier, 1981). On the subject of simplistic views, the words of Fox (1987, p. 138) are surprisingly current for the EG field as well: "We should continue to expect results from policy interventions. We should continue to be critical of agencies the bureaucratic processes of which prevent the job from getting done. But it should be expected that policy impacts are more like ripples caused by throwing a pebble in a pond than a cue impacting a billiard ball."

ORGANIZATIONAL ACTION AND IMPLEMENTATION EVALUATION

This section attempts to better clarify the role and importance of the contributions from organizational theory in evaluating EG implementation. For this purpose we will use a perspective (Maggi, 1990, 2003) in which:

<<BL>>

- the organization is meant as a process of actions and decisions, and, further, the organizational structure is the whole of the intentionally changeable relations between the component parts;
- rational action is meant in an intentional and limited sense;
- the subjects are an integral part of the process (by which we mean that the process overrides any separation between individual and organization).

<<END BL, NO INDENT>>

These principles are part of a conceptual framework known in Italy as the theory of organizational action (TOA). Starting with the work of some classic authors (chronologically: Weber, 1922; Barnard, 1938; Simon, 1947; Thompson, 1967; Giddens, 1984), Maggi has identified a common thread on which he has built his proposal. Action is a term that in social studies indicates the connection of the behavior of a human agent to a subjective meaning. Therefore, a concept of organization in terms of actions and decisions is "mindful of the individuals and the *relational structures* that these produce and *reproduce* unceasingly" (italics in the original, Maggi and Albano, 1997, p. 220).

Before we take our discussion further, we must point out, to avoid any ambiguity or misunderstanding, that readers should not be misled by the apparent similarity of the term "theory of organizational action" to the theory of action proposed by Argyris and Schön (1978) and Argyris (1996). The theory of action perceives the organization as an open system in which learning is *a*—if not *the*—primary mechanism used by the organization to adapt itself to the challenges of the external environment. We must also credit Argyris and Schön with making the distinction between *single-loop learning* (i.e., the learning resulting from feedback generated by a process of observing the consequences of action and using this knowledge to adjust subsequent action in order to avoid similar mistakes in the future) and *double-loop learning* (i.e., the learning resulting from the fact that the system questions its own underlying assumptions and values and risk, fundamentally changing the terms of its own organizing) (Hatch, 2006, p. 316). This is neither the time nor the place to explore the contents of the Argyris and Schön theory, but we must point out two aspects that clearly underscore the gap between the two theories: the first centers on the concept of organization ("contingentist" and reifying in the case of Argyris and Schön; a process of actions and decisions in Maggi's case); the second on the explanatory model

of social phenomena that the authors propose (respectively, functional logic and conditional logic).

Returning to TOA, the originality of this theory can be seen from several perspectives. However, due to a lack of space, we will only cite those most useful to our conception of EG. We will start with some indications on the methods with which this theory addresses the relationship between technology and organization and the rationality concept. While, on the one hand, there are perspectives that see the organization as a concrete reality, in which there are also intentional behaviors (or action), and on the other hand, there is the perspective (on which TOA is based) whereby the organization is action developing over time. Organizational action is a particular form of rational behavior, given that it is, by definition, an action that tends to fit the means to the ends. Technology should be understood both as the whole of the technical knowledge and as the artifact, or a component of the processes. This dual role makes technology important from the organizational standpoint: it might lead to constraints or opportunities of change in the action of the individual and collective actors. The idea of opportunity evokes a choice of alternatives in a scenario that is never completely closed nor defined beforehand. Technology is a key factor of organizational regulation processes.

The different options for evaluating organizational action derive from the meeting of two uncertain dimensions: the “expected results” and “the technical knowledge needed to achieve the objectives” (Maggi, 1990, p. 95). The efficiency evaluation (which is given a preponderant weighting in both academic reflection and managerial practice) is only one of the possible pathways. It requires both certainty in the objectives and a full knowledge of the cause/effect relationships. In the presence of uncertain cause/effect relations but defined objectives, the evaluation is exclusively of the achievement of the objectives, or, the evaluation of efficacy. In

cases where the purposes of the organizational action are ambiguous, the correct evaluation reference is the social test (Thompson, 1967). For example, one can make comparisons with similar organizations or take into account the temporal performance of the analyzed phenomenon. TOA lets the evaluator place EG among the choices of organizational action guided by bounded rationality. This reference to nonabsolute rationality enables us to affirm that the road leading to implementation can lead to nonunivocal results not only—banally—because the direction and the intensity of the effects depend on the specificity of the context, but also because the choices related to the artifacts are such that these produce rules that—at the various levels—influence the behaviors and the order of the processes and, therefore, the relative results.

Understanding the organization as a process stems from an epistemological perspective that, despite being present from the start of the methodological debate on social sciences, has remained little known to the North American scientific community, precisely that environment in which managerial reflection has always dominated. The notion of process incorporates coming into existence and developing, the "becoming," and so induces us to think of the organization as a dynamic instead of a reified entity. The same notion of process enables us to surpass the opposition between individual and organization, between actor and system.

On those conceptual bases, we can place the EG evaluation in a strictly organizational key. Let us see how. In the organization understood as a process, the possibility of successfully maximizing the results (and, thus, of evaluating them in terms of efficiency) is excluded a priori, because it would be like saying that the relationship between the means—that is, the technical knowledge, the software programs, the operating practices, and the ICT platforms developed and deployed—and the ends, that is, the problem that lies at the root of the public service program, is optimal. However, it is always possible to direct the actions and the decisions of the public

administrations on the theme of EG toward the results that are satisfactory for the diverse subject groups, the needs and opinions of which—we reiterate—can diverge considerably and change over time. In other words, the evaluation that is always possible is the organizational "fitness for the future" (Thompson, 1967, p. 84), that is, the instrumentality of the actions, the alternative results, the regulation of the actions and the relations of these latter, their unfolding, and the reciprocal congruence of all of these factors in the organizational processes.

When the evaluation of EG, in turn meant as a process, is characterized by numerous objectives and just as many decisional levels distinguishable only in analytical terms, it excludes that one sole "system" or reference model can be proposed for all the public administrations indiscriminately. The evaluation process and its results will depend on the decisional level taken into account and on the variability of the objectives and the technical knowledge characterizing the situation observed.

TOA, contrary to what is advanced by the mainstream literature—which assumes the absolute determination or, conversely, the total nondetermination of the evaluation system—"reveals the heuristic nature and, at the same time, the weakness and the strength of character of the organizational process" (Maggi, 1990, p. 96). The interpretive procedure, and thus the evaluation, is based on the adequate causality opposed by, on the one side, the absolute causality needed for the positivist view, and, on the other, the denial of any causal explanation by the subjectivist view.

The evaluation cannot be extrapolated from its context because it is necessarily manifested inside an organizational process with its own specific features. The level of detail chosen for the analysis will vary in line with the needs of the evaluator, although the real situation will always be interpreted in its elements of action and decision. A description of the

whole picture is always useful, whether we are examining and interpreting large-scale organizational situations (e.g., the effects of a national program on the central agencies) or we need to focus on one phase of a broader process (e.g., the provision of an online service by a specific public agency). The analysis needs to be carried out with the aim of highlighting the expected results, the technical actions implemented to achieve them, and the effects related to regulation, that is, the organizational coordination and control processes.

In short, TOA presents us with an interpretive key that is intrinsically interdisciplinary, given that it is based on the combining of diverse contributions (i.e., those of the above-cited authors) that draw on sociological, economic, psychological, and legal knowledge. Lack of space means we must stop here, but Maggi (2003) and Maggi and Albano (1997) detailed the origins of each of the concepts used by TOA, which they later incorporated into a unitary framework. We underscore that the contributions drawn on by TOA are underpinned by the same epistemological base; for example, the common concept of organization underlying the contributions of the authors examined by Maggi. That is the first interdisciplinary level. While the second level centers on contact points with other disciplines that explore social phenomena. When faced with an "interpretive issue" (whether in terms of decisional processes in a hospital, the evaluation of technological change in a government ministry, or the relations between a company and its task environment), we must create a dialogue between the theory of organization and the theories that preside over the logics of the technical and institutional actions that characterize the diverse organizational settings. A hospital or a public agency or a company expresses objectives and adopts technical knowledge that are not the exclusive domain of organizational theory. But, equally, a health theory or a political science or economic logic does not suffice to interpret organizational settings. To enable new growth horizons to open and

expand our knowledge of organizational phenomena, our reflection must perforce draw on contributions that share the same basic orientations. A theory like TOA, already the fruit of convergences, lets us glimpse the potential harvest we can reap from the interdisciplinary dialogue.

THE E-GOVERNMENT SCENARIO IN ITALY: TWO EXAMPLES

Our viewpoint can be illustrated through two successive examples (Sorrentino, 2006, 2007) of qualitative–type studies. Reflection on these earlier research cases has convinced us of the usefulness of the TOA contribution to the EG evaluation theme. We want to clarify that—although we are dealing with studies of the change traceable to one specific public intervention—the two examples are the fruit of the author's personal scientific interests. Therefore, based on the affirmations made in the second paragraph, it is not be appropriate to consider them evaluation studies. They both develop the analysis of EG-related change from the standpoint of the implementer organizations.

The problem addressed in both of these works is well known to the PA involved in EG (Hertzum, 1995): the dematerialization of paper-based document flows. An issue that takes on special relevance in all countries, due to its pervasiveness—no public administration, either central or local, is excluded—and economic importance. Our scientific interest in this subject was sparked by the difficulties encountered by many Italian PAs when it came to implementing the new document-management solutions. In addition, we wanted to understand why, despite the fact that the adoption of the so-called computerized correspondence register (or "CCR," an application system whereby each document is automatically filed and retrieved) had been

compulsory since January 2004, a good two years later, the state of implementation in compliance with the requirement has been defined as “insufficient and inadequate” by CNIPA, the authority charged with monitoring its progress (CNIPA, 2006).

In the first case we closely analyzed the Web portal developed and launched by a regional authority (which we shall call by the pseudonym of “ILA,” Italian Local Administration) that provides a range of services to both citizens and internal departments. In particular, we analyzed the implementation of the CCR, first describing the planning trail that led to the design and use of the software artifact, which enabled us to deduce that the agency had sought at all costs to create an environment in which change would be accepted thanks to the proactive involvement of all of the organization members concerned. Above all, ILA sought to prevent phenomena of resistance by adopting user-centric principles to guide the development project (Dent and Galloway-Goldberg, 1999; Newman, 1989). However, that approach failed to forestall such problems when the new system actually came onboard. The ILA monitoring team first noted that the number of documents processed by the new system was far lower than both the average volume managed previously using traditional methods and the levels estimated in the CCR design phase. A later empirical analysis then revealed substantial differences in the behaviors and the working practices employed within the ILA itself: for example, the CCR was correctly used only in some units, while others completely abandoned the new system in favor of a return to the traditional paper-based filing system; in addition, the staff of those offices where the new solution remained unused or underused attributed the cause to matters of a technical nature, complaints that were invariably echoed by the senior officers. That led the ILA monitoring team to intervene at various levels to solve the impasse: on the technological front (some software programs were changed and the unit managers were given new software

applications to control the volume of the administrative cases dealt with); on the personnel training front (further training courses were held for nonoperational staff); and on the interorganizational relations front (discussion groups were instituted between the office managers and other relevant actors). Ultimately, the efforts of this regional agency paid off, given that ILA's new system became fully operational ahead of the deadline set by the law.

Our study enabled us to show that the design team primarily understood and evaluated technological change by believing that the design and implementation of EG are programmable and definable right down to the smallest detail. Why then, in our research, did we seek to propose an alternative interpretive key? We believe that the rational interpretation of change, while unquestionably interesting, does not allow us to capture the crucial aspects, such as the implications stemming from aspects of organizational regulation. The ILA case was a clear-cut demonstration of how, even in an EG project imposed by law ("nondiscretionary in nature," according to Joshi and Pant [2002]), where the room for negotiation is almost zero, change cannot be a consequence of the mere replacement of obsolete with new practices, introduced earlier by the legislator, the experts in the matter, or management. The introduction of the CCR imposed additional constraints at various decisional levels, prescribing a logic of action with which the public agencies were forced to comply, but it also opened new horizons, new opportunities, and new rules. That enabled us to explain why, in ILA's case, we noticed the combined presence of apparently irreconcilable phenomena (resistance to and, conversely, acceptance of the ICT artifact) in the same organizational unit. Finally, from a purely rational perspective, it would be hard to predict a completely unexpected outcome related to the introduction of the new filing system at ILA; more precisely, we refer to the surprising "rescue" of certain operators who, in the initial phase, had actually been excluded from training courses

and who, thanks to the features of the CCR system, were now able to fully reenter the production process and even improve their professional status.

The second study differs from the first one because it takes a macro view to address the dematerialization of document flows, that is, it considers Italy's central PA as a unified system (sixty-one agencies employing around 650,000 people). When we carried out our research, CNIPA had conducted two fact-finding surveys, for which it prepared a questionnaire to gather information useful for assessing the level achieved by the central PA in terms of the objectives set by the law. The monitoring reports indicated the presence of diversified and heterogeneous implementation strategies, the results of which were sometimes disappointing, given the number of agencies that failed to implement the new system. Most Italian PAs had tackled the CCR project by reducing it to a small number of pilot experiences or by implementing solely the document "marking" functions. The situation was even more surprising given the fact that the national project concerned the implementation of "mandatory solutions due to legislation, where there is no option but to proceed" (Jones and Irani, 2003).

Our study examined the evaluation model developed by CNIPA in order to fully grasp its motivating logic. In general terms, CNIPA has identified a number of measurable parameters it believes essential for the purpose of implementation, for example, the level of implementation of the electronic document management requirements, the effectiveness of the projects and/or services developed, and the project risk levels. Each agency was given a questionnaire in which it was asked to grade its position for each indicator. This methodological approach facilitates the computation and comparison of the results in line with a number of criteria—by category and size of administration, by type of technical solution, by functionalities implemented, and so on. In addition, the model enables us to follow the temporal evolution of the projects as these

proceed at the national level in terms of the resources absorbed, the processes launched, the number of organizational units affected by the new systems, the products supplied, the number of staff assigned to the registration activities, and the results achieved. The differences encountered between one agency and another were then matched to the diverse weighting represented by each parameter, in other words, to the failure to comply with the legislative provisions.

In our research, we sought to reinterpret the snapshot provided by the CNIPA reports in terms of the theoretical comparison, using it to try to clarify why the evaluation model adopted as part of the project-monitoring process is unsatisfactory, inasmuch as it does not help us to correctly interpret the highly mixed empirical evidence that characterizes Italy's central PA. In other words, at the time, the CNIPA model did not offer information that helped us to understand why—despite the high level of standardization of the technological solutions, the relative ease of their acquisition, and their low cost—we could still observe, more than three years after the CCR law was enacted, significant delays and differences in the use of the new digital systems, even between administrations with similar features.

In seeking to answer this puzzle we adopted the contributions found in the organizational literature and especially the suggestions offered by different theoretical frameworks: the contingency theory approach (Lawrence and Lorsch, 1967), the transaction costs theory (Williamson, 1975), and the theory of organizational action (Maggi, 1990). In other words, we drew on theoretical contributions that assume the organization's need to adapt to contingent factors—such as, changes in the law, different environmental conditions, technological features, and the minimization of transaction costs—as our interpretive starting point in analyzing and discussing the situation of the Italian central PA. We then proceeded in a similar way to adopt the alternative approach offered by the theory of organizational action. This theory bucks the

mainstream trend because it sees technology not as an external factor that "propels" organizational change in specific directions, but as an organizational choice itself. We concluded our study by stating that, while the CNIPA model is unquestionably useful for identifying some general trends and recording the state of progress of the CCR project, it cannot be deemed a generalist interpretive key for all of the administrations involved on this front.

While many lessons can be learned from these experiences, we point out what we believe are the most important. First, both cases reinforce the assumption that EG should not be considered as exclusively an ICT project requiring PA structures and individuals to adjust to new operational routines. What seems clear from our examples is that what is known as the "goal-fixed" evaluation (Chen and Rossi, 1983), that is, a type of evaluation that simply compares the project results with the performance objectives on baseline conditions, is not sufficient to formulate an opinion on EG implementation. As confirmed by the CNIPA-developed model, the merit of a "goal-fixed" approach is that it simplifies the evaluation; however, the problem is confined to description—what has or has not happened (Browne and Wildavsky, 1983, p. 191).

Second, the process-oriented view promotes an understanding of change that takes account of the interplay between structural and agency dynamics at multiple levels of analysis (McNulty, 2003). Placing the organizational processes of action and decision at the center of the analysis means considering time a key variable. That is compatible with the assumptions of the ongoing evaluation—that which offers the policymakers and managers the highest cognitive input for correcting or reorienting the public objectives (Lippi, 2007).

Third, the process perspective of organizing (McNulty, 2003) has the advantage of being applicable—drawing on the same conceptual framework—to EG programs, projects, and services, or, indeed, parts of any of these. At the same time, the processual vision of

organizational phenomena enables us to analyze situations in which EG-related change goes beyond the boundaries of a specific institution. This opportunity is especially significant, given that EG is rarely implemented by a single public agency alone: see, for example, the trend of sharing the delivery of e-services via intermunicipal agreements (Sorrentino and Ferro, 2008).

SUMMARY AND CONCLUSIONS

This chapter maintains that the need to evaluate the results of EG programs is now more pressing than ever before, especially in those contexts where "the evaluation practice centers primarily on the analysis of public investments in the preliminary stage, having given up the investigation of the postimplementation effects on the concrete reality of things" (Marra, 2004, p. 52).

We started by saying that EG evaluation is problematic and complex and we have attempted to demonstrate that the solution to the problem must be found by referring to conceptual aspects, leading us to propose a theoretical framework that, in our opinion, could be used to leap the evaluation hurdle. We have suggested the use of TOA—which intrinsically straddles more than one discipline—because it draws on the studies of several classic authors of organization science whose contributions to the field were conceived to apply broadly across all types of organizations. Therefore, by recognizing the validity of using that proposal, future EG evaluations should take into account not one, but a combination of methods and techniques that—while deriving from diverse disciplinary areas—share the approach outlined here, according to which the organization is seen as a process of actions and decisions guided by intentional and bounded rationality.

One discipline alone cannot be held to be the exclusive home of evaluation. Nevertheless, there can be no doubt that organizational theory presides over the process logic that structures the technical goals and technical actions in organizational settings (Maggi, 1990). The theories based on a concept of technological change inseparable from organizational change can help us understand the meaning of the EG decisions and explain their results in terms of "adequate causality." This will establish new interdisciplinary contact points where organizational evaluation can be combined with other types of assessment (e.g., economic analysis, policy inquiry, and technical evaluation). The concept of intentional and bounded rationality also comprises closely interwoven economic, sociological, and psychological elements. Therefore, it could be used as a starting point from which to develop a rich dialogue between the different study spheres (e.g., economics, management science, law, and sociology) interested in analyzing EG implementation.

We believe the TOA theory is useful for both scholars who design future research programs and for practitioners (e.g., civil servants and/or policymakers) who may be the clients of future evaluation initiatives. From the concrete viewpoint, the perspective described herein promotes an understanding of the practice of EG evaluation extended to the entire lifespan of a project. The understanding of process is valuable because it is also an essential part of capacity building (Barrett, 2004). It can provide public managers with a useful conceptual toolkit. It can help, for example, to preventively incorporate evaluation-related needs as early as the planning and design phase of the EG project or program. It also suggests that because EG requires the joint use of many lines of intervention and support actions, the typical measuring of outputs or financial or management effects should necessarily be added to other types of indicators more oriented to the analysis of the social impact of the administrative actions and public policies.

One of the limitations of this chapter is the fact that the discussion has been advanced solely on a theoretical level and from the standpoint of the implementer organizations. We acknowledge that it is difficult to apply an evaluation approach that uses an alternative interpretive key of organizational phenomena to that of the mainstream and that, in any event, it cannot solve all of the complex problems mentioned in the preceding pages. It is our intention to compare our assumptions with real-world experiences in which researchers can work alongside evaluation teams. Given the nature of evaluation research: "evaluation is . . . distinguished from other academic fields by the continuous interplay between the theoretical and the practical" (Christie, 2003, p. 91), we are convinced that multiple analysis of the same collected data (Gil-Garcia and Pardo, 2006) provides a more meaningful explanation of EG challenges.

At this point, a question arises: why has the contribution of organization theory only seen sporadic and relative use to date? We propose two possible answers. First, the organization approach is generally little used in public policy discourses, which means we must work hard at diffusing it among both universities and practitioners. Indeed, this contribution is a first attempt in that direction. Second, up to now, the different disciplines have offered separate and contrasting interpretations of EG. Significantly—and therefore worthy of recognition and encouragement—the academic world is starting to chart a course that links the knowledge generated by different branches of learning. However, we underscore that most of the cases in question see the efforts of researchers focusing more on the accumulation of different knowledge—that is and continues to be kept separate—rather than on an effective meeting between the disciplines to build something new, something that goes beyond "one-way" interpretations. Nevertheless, should this perspective become widely adopted, we will have to take into account the need to interpret and evaluate the results of that choice.

ACKNOWLEDGMENTS

The authors are grateful to the editor and three anonymous reviewers for suggestions and advice, which were incorporated into the text. Naturally, any errors or inaccuracies are the sole responsibility of the authors.

REFERENCES

Argyris, C. 1996. Unrecognized defenses of scholars: Impact on theory and research. *Organization Science,* 7, 1, 79–87.

Argyrys, C., and Schön, D. 1978. *Organizational Learning*. Reading, MA: Addison-Wesley.

Barnard, C. 1938. *The Functions of the Executive*. Cambridge: Harvard University Press.

Barrett, S.M. 2004. Implementation studies: Time for a revival? Personal reflections on 20 years of implementation studies. *Public Administration,* 82, 2, 249–262.

Becker, J., and Niehaves, B. 2007. Epistemological perspectives on IS research: A framework for analyzing and systematizing epistemological assumptions. *Information Systems Journal,* 17, 197–214.

Beynon-Davies, P., and Williams, M.D. 2003. Evaluating electronic local government in the UK. *Journal of Information Technology,* 18, 137–149.

Browne, A., and Wildavsky, A. 1984. What should evaluation mean to implementation? In J. Pressman and A. Wildavsky, *Implementation,* 3d ed. Berkeley: University of California Press.

CapGemini and TNO Consulting. 2004. Does e-government pay off? November. Available at: http://modernisering.dk/fileadmin/user_upload/documents/Udsyn/Internationale_rapporter/Does_e-government_pay_off.pdf

Chan, C.M.L.; Lau, Y.; and Pan, L. 2008. E-government implementation: A macro analysis of Singapore's e-government initiatives. *Government Information Quarterly,* 25, 239–255.

Chen, H.T., and Rossi, P.H. 1983. Evaluating with sense. *Evaluation Review*, 7, 3, 283–302.

Cheng, J.; Cheng, S.; and Yang, M. 2007. Evaluating the e-government based on BSC. In W. Wang, Y. Li, Z. Duan, L. Yan, H. Li & X. Yang (eds.) *Integration and Innovation Orient to e-Society,* Vol. 2, 397–403. Boston: Springer.

Christie, C.A. 2003. Understanding evaluation theory and its role in guiding practice: Formal, folk, and otherwise. *New Directions for Evaluation,* 97, 91–93.

Centro Nazionale per Informatica nella Pubblica Amministrazione (CNIPA). 2006. Protocollo informatico e gestione dei flussi documentali nella pubblica amministrazione centrale. Stato di attuazione, Quaderni, 22. Available at: www.cnipa.gov.it/site/it-IT/La_Documentazione/Pubblicazioni/Quaderni/

———. 2007. Linee strategiche volte ad indirizzare le Amministrazioni nella predisposizione del piano triennale per l'informatica 2008–2010. Available at: www.cnipa.gov.it/site/_files/Linee%20Stra%202007-2009.pdfCresswell, A.M.; Burke, G.B.; and Pardo, T.A. 2006. Advancing return on investment analysis for government IT: A public value framework. Center for Technology in Government, University at Albany, September. Available at: http://www.ctg.albany.edu/publications/reports/advancing_roi/advancing_roi.pdf

Crozier, M. 1976. Comparing structures and comparing games. In G. Hofstede and S. Kassem (eds.), *European Contributions to Organization Theory*. Assen: Van Gorcum.

Cyert, R.M., and Kumar, P. 1994. Technology management and the future. *IEEE Transactions on Engineering Management,* 41, 4, 333–334.

Dawes, S. 2008. An exploratory framework for future e-government research investments. *Proceedings of the Forty-first Hawaii International Conference on System Sciences* (HICSS-41), Big Island, Hawaii, January 7-10.

De Marco, M., and Sorrentino, M. 2007. Sowing the seeds of IS cultivation in public service organisations. *Journal of Information Technology,* 22, 2, 184–194.

De, R. 2006. Evaluation of e-government systems: Project assessment vs. development assessment. In M.A. Wimmer, H.J. Scholl, A. Grönlund, and K.V. Andersen (eds.), *Electronic Government, Proceedings of the Fifth International Conference,* EGOV 2006, 317–328. Krakow, Poland, September 4–8. Berlin/Heidelberg: Springer-Verlag.

Dent, E.B., and Galloway-Goldberg, S. 1999. Challenging "resistance to change." *Journal of Applied Behavioral Science,* 35, 1, 25–41.

Dunleavy, H.P.; Margetts, H.; Bastow, S.; Callaghan, R.; and Yared, H. 2002. Progress in implementing e-government in Britain: Supporting evidence for the National Audit Office Report "Government on the Web II." Available at: http://governmentontheweb.co.uk/downloads/derloitte/Final_Draft_Survey_Document_240402.pdf

EITO, *European Information Technology Observatory*. 2007. Frankfurt: EITO-EEIG.

Fear, W.J. 2007. Programme evaluation theory: The next step toward a synthesis of logic models and organisational theory. *Journal of Multidisciplinary Evaluation,* 4, 7, 13–25.

Ferlie, E.; Hartley, J.; and Martin, S. 2003. Changing public service organizations: Current perspectives and future prospects. *British Journal of Management,* 14, S1–S14.

Fletcher, P.D. 2002. The government paperwork elimination act: Operating instructions for an electronic government. *International Journal of Public Administration*, 25, 5, 723–736.

Fox, J.C. 1987. Biases in public policy implementation evaluation. *Policy Study Review,* 7, 1, 128–141.

Giddens, A. 1984. *The Constitution of Society*. Cambridge: Polity Press.

Gil-Garcia, J.R., and Pardo, T.A. 2006. Multi-method approaches to digital government research: Value lessons and implementation challenges. In *Proceedings of the Thirty-ninth Hawaii International Conference on System Sciences* (HICSS-39), Kauai, Hawaii. January 4-7.

Goggin, M.L. 1986. The "too few cases/too many variables" problem in implementation research. *Western Political Quarterly,* 39, 2, 328–347.

Griffin, D., and Halpin, E. 2005. An exploratory evaluation of UK local e-government from an accountability perspective. *Electronic Journal of e-Government,* 3, 1, 13–28.

Grimsley, M.; Meehan, A.; and Tan, A. 2005. Capital accounting: Evaluating e-government projects from a community development perspective. In Z. Irani, T. Elliman, and O.D. Sarikas (eds.), *Proceedings of the eGovernment Workshop '05* (eGOV05). Brunel University, UK, September 13.

Grönlund, A., and Andersson, A. 2006. e-Gov research quality improvements since 2003: More rigor, but research (perhaps) redefined. In M.A. Wimmer, H.J. Scholl, A. Grönlund, and K.V. Andersen (eds.), *Electronic Government, Proceedings of the Fifth International Conference*, EGOV 2006, 1–12. Krakow, Poland, September 4–8. Berlin/Heidelberg: Springer-Verlag.

Grönlund, A., and Horan, T.A. 2004. Introducing e-gov: History, definitions and issues. *Communications of the AIS,* 15, 713–729.

<<

Gupta, M.P., and Jana, D. 2003. Government evaluation: A framework and case study. *Government Information Quarterly,* 20, 4, 365–387.

Hatch, M.J. 2006. *Organization Theory,* 2d ed. Oxford: Oxford University Press.

Heeks, R., and Bailur, S. 2007. Analysing e-government research: Perspectives, philosophies, theories, methods and practice. *Government Information Quarterly*, 24, 243–265.

Hertzum, M. 1995. Computer support for document management in the Danish central government. *Information Infrastructure and Policy,* 4, 2, 107–129.

Irani, Z.; Love, P.; Elliman, T.; Jones, S.; and Themistocleous, M. 2005. Evaluating e-government: Learning from the experiences of two UK local authorities. *Information Systems Journal,* 15, 1, 61–82.

Janssen, D.; Rotthier, S.; and Snijkers, K. 2004. If you measure it they will score: An assessment of international eGovernment benchmarking. *Information Polity,* 9, 121–130.

Jones, S., and Irani, Z. 2003. IS evaluation in the UK public sector: Emerging research themes and issues. *Ninth AMCIS Americas Conference on Information Systems* , Paper 178, 1444–1452. http://aisel.aisnet.org/amcis2003/178

Joshi, K., and Pant, S. 2002. A classification framework to assess and guide IT investments. *Eighth AMCIS Americas Conference on Information Systems,* Paper 171, 1239–1243. http://aisel.aisnet.org/amcis2002/171

Kaylor, C., Deshazo, R., and van Eck, D. 2001. Gauging e-government: A report on implementing services among American cities. *Government Information Quarterly,* 18 293–307.

Kraemer, K., and Dutton, W. 1979. The interests served by technological reform. *Administration and Society,* 11, 1, 80–106.

Kumar, K. 1990. Post implementation evaluation of computer-based information systems: Current practices. *Communications of the ACM,* 33, 2, 203–212.

Lawrence, P.R., and Lorsch, J.W. 1967. *Organization and Environment: Managing Differentiation and Integration.* Boston: Harvard University Press.

Lim, J.H., and Tang, S. 2008. Urban e-government initiatives and environmental decision performance in Korea. *Journal of Public Administration Research and Theory,* 18, 1, 109–138.

Lippi, A. 2007. *La valutazione delle politiche pubbliche*. Bologna: il Mulino.

Löfstedt, U. 2007. E-government services in local governments—a study of development in Swedish municipalities. *Journal of Organisational Transformation and Social Change,* 4, 2, 157–176.

Maggi, B. 1990. *Razionalità e benessere. Studio interdisciplinare dell'organizzazione*, 3d ed. Milan: Etaslibri.

———. 2003. *De l'agir organisationnel. Un point de vue sur le travail, le bien-être, l'apprentissage.* Toulouse: Octarès.

Maggi, B., and Albano, R. 1997. La teoria dell'azione organizzativa. In G. Costa and R.C.D. Nacamulli (eds.), *Manuale di Organizzazione Aziendale,* Vol. 1, 2d ed., 220–249. Turin: Utet.

Markus, M.L. 1983. Power, politics and MIS implementation. *Communications of the ACM,* 26, 6, 430–444.

Marra, M. 2004. Alcuni aspetti e problemi della valutazione nella PA. *Rassegna Italiana di valutazione,* 8, 29, 41–58.

Mazmanian, D.A., and Sabatier, P.A. 1981. *Effective Policy Implementation*. Lexington, MA: Lexington Books.

McNulty, T. 2003. Redesigning public services: Challenges of practice for policy. *British Journal of Management,* 14, S31–S45.

Newman, M. 1989. Some fallacies in information systems development. *International Journal of Information Management,* 9, 127–143.

Organization for Economic Cooperation and Development (OECD). 2007. *E-Government Studies: Netherlands.* Paris.

———. 2005. *E-Government Studies: Norway.* Paris.

———. 2004. *The E-Government Imperative.* Paris.

Pardo, T., and Scholl, H.J. 2002. Walking atop the cliffs: Avoiding failure and reducing risk in large scale e-government projects. In *Proceedings of the Thirty-fifth Annual Hawaii International Conference on System Sciences* (HICSS-35). Big Island, Hawaii, USA, January 7-10.

Peters, R.M.; Janssen, M.; and van Engers, T.M. 2004. Measuring e-government impact: Existing practices and shortcomings. In M. Janssen, H. G. Sol, R. W. Wagenaar (Eds.): *Sixth International Conference on Electronic Commerce,* ICEC ’04, 480–489. Delft, The Netherlands, October 25-27.

Pina, V.; Torres, L.; and Royo, S. 2007. Are ICTs improving transparency and accountability in the EU regional and local governments? An empirical study. *Public Administration,* 85, 2, 449–472.

Pressman, J., and Wildavsky, A. 1973. *Implementation,* 3d ed. Berkeley: University of California Press.

Regonini, G. 2001. *Capire le politiche pubbliche*. Bologna: il Mulino.

Rossi, P.H., and Berk, R.A. 1981. An overview of evaluation strategies and procedures. *Human Organization*, 40, 4, 287–299.

Scholl, H.J. 2003. E-government: A special case of business process change. In *Proceedings of the Thirty-sixth Hawaii International Conference on System Sciences* (HICSS-36).Big Island, Hawaii, USA, January 6-9.

———. 2005. Organizational transformation through e-government: Myth or reality? In M.A. Wimmer, R. Traunmüller, A. Grönlund, and K.V. Andersen (eds.), *Electronic Government, Proceedings of the Fourth International Conference,* EGOV 2005, 1–11. Copenhagen, Denmark, August 22–26. Berlin/Heidelberg: Springer-Verlag.

———. 2006. Is e-government research a flash in the pan or here for the long shot? In M.A. Wimmer, H.J. Scholl, A. Grönlund, and K.V. Andersen (eds.), *Electronic Government, Proceedings of the Fifth International Conference,* EGOV 2006, 13–24. Krakow, Poland, September 4–8. Berlin/Heidelberg: Springer-Verlag.

Simon, H.A. 1947. *Administrative Behavior*. New York: Macmillan.

Sorrentino, M. 2006. Shaping e-government through process thinking. Twenty-second EGOS, European Group of Organization Studies Colloquium, Bergen, Norway, July 6–8.

———. 2007. Implementation as the moment of truth. In A. Grönlund, H.J. Scholl, K.V. Andersen, and M. Wimmer (eds.), *Electronic Government, Communication Proceedings of the Sixth International Conference,* EGOV 2007, 281–292. Regensburg, Germany, September 3–8. Berlin/Heidelberg: Springer-Verlag.

Sorrentino, M., and Ferro, E. 2008. Does the answer to egovernment lie in intermunicipal collaboration? An exploratory Italian case study. In M. Wimmer J.H. Scholl, and E. Ferro (eds.), *Electronic Government, Proceedings of the Fifth International Conference,* EGOV 2008, 1–12. Turin, Italy, August 31-September 5. Berlin/Heidelberg: Springer-Verlag.

Stame, N. 2007. *Classici della valutazione*. Milan: Franco Angeli.

Thompson, J.D. 1967. *Organizations in Action*. New York: McGraw-Hill.

Vann, J.L. 2004. Resistance to change and the language of public organizations: A look at "clashing grammars" in large-scale information technology projects. *Public Organization Review,* 4, 47–73.

Weber, M. 1922. *Wirtschaft und Gesellschaft.* Tübingen: Mohr.

West, D.M. 2005. *Digital Government.* Princeton: Princeton University Press.

———. 2006. Global E-Government. August. Available at http://www.agendadigital.cl/files/GLOBAL%20E-GOVERNMENT%202006.pdf

Williamson, O. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.

Wong, W., and Welch, E. 2004. Does e-government promote accountability? A comparative analysis of website openness and government accountability. *Governance,* 17, 2 (April), 275–297.

Yildiz, M. 2007. E-government research. Reviewing the literature, limitations and ways forward. *Government Information Quarterly,* 24, 646–665.